

ABSTRACT OF THE DISCLOSURE

According to the present invention, there is provided a sample surface treating apparatus for processing a fine pattern by plasma etching,  
5 ~~comprising~~ <sup>including</sup> a stage provided in a chamber, on which a sample to be subjected to a surface treatment is placed; etching gas <sup>supply source</sup> ~~supplying means~~ for continuously supplying an etching gas for plasma generation into  
10 the chamber; <sup>a</sup> ~~plasma generating means~~ <sup>generator</sup> for generating a high-density plasma in the chamber; a bias power supply for applying a bias voltage of 100 kHz or higher to the stage independently of the plasma  
15 ~~generation~~ <sup>a</sup> ~~and pulse modulating means~~ <sup>modulator</sup> for modulating the bias power supply at a frequency of 100 Hz to 10 kHz, wherein a surface treatment in which the minimum  
~~feature size is 1  $\mu$ m or smaller is performed to the sample placed on the stand.~~ <sup>on</sup> ~~the~~ <sup>stage</sup>